FIG. **5** is an illustrative representation of an embodiment of the present invention in an open position at approximately 120° from closed position. As can be appreciated, as illustrated, base link **212** and lid link **228** have each further rotated about a common axis **270** (see FIG. **2**). Further, base link **212** and lid link **228** have each further rotated about axes **260**, **250** (see FIG. **2**) respectively. Still further, base link **212** and lid link **228** have further translated along slide ways **604** and **608**, respectively, to an extended position.

Referring to FIG. **6**, FIG. **6** is an illustrative representation of an embodiment of the present invention in various open positions. More particularly, FIG. **6** illustrates relative positions of base slide way **608** and lid slide way **604** in various open positions (e.g. 0°(**612**), 45°(**616**), 90°(**620**), and 120° (**624**)). As noted above, slide ways **604** and **608** may be configured to constrain movement to a desired geometry. In some configurations, slide ways may be arcuate in path. In other configurations slide ways may be semi-arcuate or straight in path. The particular geometry selected for a slide way path depends on user requirements.

Turning to FIG. **7**, FIG. **7** is a graphical representation illustrating a system movement curve **700** of translation over rotation in embodiments of the present invention. As can be appreciated, the translation curves described herein are for illustrative purposes to demonstrate general trends and are not intended to be inherently limiting. As such, a translation axis **704** and a rotation (in degrees) axis **708** are illustrated. An x-translation curve **712** may represent a general trend of movement of a lid. That is, the movement of a lid through a first plane of motion with respect to a base. As noted above, an orientation legend **120** is illustrated in FIG. **1**. Thus, x-translation may be thought of as horizontal movement (i.e. first plane) with respect to a base **204** (see FIG. **2**). X-translation curve **712** demonstrates a general trend upward **716** from a net zero position. A net zero position is a position corresponding to a position at 0° of rotation. The general upward trend **716** continues to approximately 65° of rotation whereupon a general downward trend **720** may be observed. The general downward trend **720** then continues until the end of rotation at approximately 120° of rotation.

A y-translation curve **724** may represent a general trend of movement of a lid. That is, the movement of a lid through a second plane of motion with respect to a base. As noted above, an orientation legend **120** is illustrated at FIG. **1**. Thus, y-translation may be thought of as vertical movement (i.e. second plane) with respect to a base **204** (see FIG. **2**). Y-translation curve **724** demonstrates a general trend upward **728** from a net zero position. A net zero position is a position corresponding to a position at 0° of rotation. The general upward trend **728** continues to approximately 10° of rotation whereupon a general downward trend **732** may be observed. The general downward trend **732** then continues until the end of rotation at approximately 120° of rotation.

As may be appreciated, selection of particular geometries of the components described herein may have a marked effect on exact translation curves. Thus, translation curves illustrated in this example, is indicative of a general trend rather than as an exact path. For example, where a slide way is configured as a arcuate path, a corresponding translation curve may differ from a translation curve from a slide way configured as a straight path although, in some examples, a start point and an endpoint may be the same for both paths. By selecting a particular geometry for a slide way path, specific tolerances may be achieved. Likewise, in other examples, different selected pin placements may result in different translation curves.

Turning to FIG. **8**, FIG. **8** is an illustrative representation of a friction clip in accordance with an embodiment of the present invention. In particular, friction clip **804** may be configured to apply friction to base pin **216**. Frictional elements may be selected in accordance with user preferences. In one embodiment, frictional element **804** may apply a linear friction component to base **216** through out the rotation range of movement. Linear friction may be desirable so that movement of a lid is uniform. Further, friction may be selected so as not to overcome the stationary weight of a base in embodiments of the present invention.

While this invention has been described in terms of several embodiments, there are alterations, permutations, and equivalents, which fall within the scope of this invention. It should also be noted that there are many alternative ways of implementing the methods and apparatuses of the present invention. For example, a ratcheting mechanism may be used instead of or in coordination with friction elements as illustrated. One skilled in the art can appreciate that a ratcheting mechanism may provide similar functionality as a friction element. Further more, embodiments of the present invention may find utility in other low profile applications requiring a hinge mechanism. The present invention may find further utility in applications requiring light weight construction materials. It is therefore intended that the following appended claims be interpreted as including all such alterations, permutations, and equivalents as fall within the true spirit and scope of the present invention.

What is claimed is:

1. A portable computing device comprising a base, a lid and a hinge mechanism, the base including at least a keyboard disposed at a top surface of the base, the hinge mechanism comprising:

a base link pivotally connected with the base such that the base link rotates about a first axis of rotation, the base link being in sliding communication with the lid;

a lid link pivotally connected with the lid such that the lid link rotates about a second axis of rotation, the lid link being in sliding communication with the base; and

a center pin pivotally connecting the base link with the lid link such that the base link and the lid link rotate about a third axis of rotation wherein the base link, the lid link, and the center pin cooperatively function to translate the lid over at least two planes of motion with respect to the base,

wherein a first rotation of the lid with respect to the base is associated with a maximum horizontal translation of the lid with respect to the base, the maximum horizontal translation of the lid with respect to the base being larger than any other horizontal translation of the lid with respect to the base with the base being coupled with the lid by the hinge mechanism, the first rotation being measured from a closed position of the lid with respect to the base, the keyboard being hidden when the lid is in the closed position with respect to the base, the keyboard being revealed when the lid is not in the closed position with respect to the base,

a second rotation of the lid with respect to the base is associated with a maximum vertical translation of the lid above the top surface of the base, the maximum vertical translation of the lid with respect to the base being larger than any other vertical translation of the lid with respect to the base with the base being coupled with the lid by the hinge mechanism, the second rotation being measured from the closed position of the lid with respect to the base, and